



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/318,684	05/25/1999	ERIC C. HANNAH	INTL-0202-US	1769

21906 7590 06/28/2006

TROP PRUNER & HU, PC  
1616 S. VOSS ROAD, SUITE 750  
HOUSTON, TX 77057-2631

EXAMINER
----------

ZAND, KAMBIZ

ART UNIT	PAPER NUMBER
----------	--------------

2132

DATE MAILED: 06/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 09/318,684	Applicant(s) HANNAH ET AL.	
	Examiner Kambiz Zand	Art Unit 2132	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 17 April 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-6,8,9,11,13,14,16-21,29-31 and 33-43 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6,8,9,11,13,14,16-21,29-31 and 33-43 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 May 1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119


- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

  
**KAMBIZ ZAND**  
**PRIMARY EXAMINER**

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 04/17/2006 has been entered.
2. The text of those sections of Title 35, U.S. Code not included in this section can be found in the prior office action.
3. The prior office actions are incorporated herein by reference. In particular, the observations with respect to claim language, and response to previously presented arguments.
4. Claims 7, 10, 12, 15, 22-28 and 32 have been cancelled.
5. Claims 1, 11, 16, 17, 19, 20 and 33 have been amended.
6. New claims 37-43 have been added.
7. Claims 1-6, 8, 9, 11, 13, 14, 16-21, 29-31 and 33-43 are pending.

### ***Response to Arguments***

8. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

9. Applicant has incorporated similar limitation of the claim 34 into claim 1 and broadening of the claim 11 which has been addressed before. New claims have been grouped with the previous claims in the rejection rendered.

***Claim Rejections - 35 USC § 103***

10. **Claims 1-6,8,9, and 33, 37-40** are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsukamoto (5,699,426).

**In regards to claims 1, 33 and 36-40**, Tsukamoto discloses a receiver (Tsukamoto: Figure 5, #25) and a display (Figure 9). This meets the limitation of a "first and second housing, a receiver to receive a digital television signal in said first housing; a digital television display in said second housing." The receiver receives a broadcast video signal and supplies the broadcast signal to a decryption display device connected to the data bus (Tsukamoto: Figure 5, #24., column 13, lines 53-66). The bus meets the limitation of "a digital graphics bus coupled to said receiver in said first housing and said display in said second housing to transmit processed video data in a digital format from said first housing to said second housing"

Tsukamoto also discloses a video data bus system which conveys digital video data signals (Tsukamoto: column 1, lines 21-22). This meets the limitation of "to transmit processed video data in a digital format from said first housing to said second housing. **it is well known in the art to use TDMS links for transmitting blanking interval data. One of ordinary skill in the art would have been motivated to use**

**TDMS links for transmitting blanking interval data for the efficiency and scalability provided by using the standard video transmission protocol.**

**In regards to claim 2-3, 5, and 8-9**, it is inherent feature of receivers to include a motherboard with a processor, and to receive two different types of serial bus interfaces. Receivers also can receive a plurality of replaceable cards, such as a motherboard with a controller, and the cards are coupled by a bus.

**In regards to claim 4**, the encrypted video signal is transmitted from the encipherer, propagates through the switch and I/O port to the data bus. The encrypted video signal is retrieved from the data bus and decrypted according to the received encryption key, which only can be decrypted by a device with the correct encryption key (Tsukamoto: column 14, lines 33-43).

**In regards to claim 6**, Tsukamoto discloses a tuner card (Tsukamoto: Figure 1, #30).

11. **Claims 11,13,14,16-21,29-31, and 41-43** are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsukamoto (5,699,426) in view of Patent No. 5,916,736 to Ryan and further in view of U.S. Patent No 5,784,427 to Bennett et al.

**In regards to claims 11, 16-19, and 41-43** Tsukamoto discloses encrypting the digital signals at the receiver and decrypting them when they are received at the digital television, connected to the bus, if it has the correct decryption key (Tsukamoto: column 14, lines 33-43). Tsukamoto however does not disclose "two different levels of encryption." Ryan discloses two different levels of encryption (Ryan: column 7, lines 15-20). It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the method of encryption and decryption across a bus as disclosed by Tsukamoto with the method of two different levels of encryption as disclosed by Ryan in order to provide a completely secure technique for encrypting and decrypting of video type signals, which is fully compatible with all video tape formats and transmission systems (Ryan: column 7, lines 5-12). However, Tsukamoto and Ryan do not teach providing encryption/ decryption via linear feedback shift registers.

Referring to the instant claims, Bennett discloses a linear feedback shift register for storing the value of the feedback and shift unit. A tap register stores a tap position indicator indicative of tap positions for the feedback and shift unit (Bennett: Abstract). Bennett discloses a tap register and combinatorial logic (Bennett: Figure 3). Bennett also discloses a memory device in figure 11. This meets the limitations of "tap register, combinatorial logic, and tap memory; linear feedback shift registers." An input sequence is injected into the shift register from an input register (Bennett: Figure 3,\* column 4, lines 5-7). This meets the limitation of a combiner adapted to

Art Unit: 2132

combine a seed signal together with feedback from said programmable tap register to create an input signal to said linear feedback shift register."

Bennett also discloses a majority mask register, which identifies bits that must be logically combined (Bennett: column 5, lines 54-56). The corresponding bits of a shift register and a majority mask register are logically combined in an exclusive or logic block (Bennett: column 5, lines 66-67). This meets the limitation of "a high level of encryption." The tap registers are programmable to allow the tap positions to be re-defined at any time (Bennett: column 5, lines 56-60). It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the method of encrypting data across a bus as disclosed by Tsukamoto using different encryption levels of Ryan with the linear feedback shift registers and tap registers as disclosed Bennett in order to reduce to a minimum the number of processing steps required in a processor, to achieve a particular operating function, such as a linear feedback shift or a stepping function used by encryption algorithms (Bennett: Abstract).

**In regards to claims 13-14 and 29-30,** Ryan discloses a fixed scrambling of information for a low level security. For a higher level the scrambling sequence can be changed as a function of time or a function of the number of fields or frames already encrypted (Ryan: column 7, lines 15-20). This meets the limitation of "changing the level of encryption," and "changing to a higher level of encryption." Ryan also discloses different encryption sequences can be used for odd

frames and even frames and each sequence can be periodically changed for each frame (Ryan: column 7, lines 21-24). This meets the limitation of unchanging the encryption on the frame boundaries."

**In regards to claim 20**, the encrypted video signal is transmitted from the encipherer, propagates through the switch and I/O port to the data bus. The encrypted video signal is retrieved from the data bus and decrypted according to the received encryption key which only can be decrypted by a device with the correct encryption key (Tsukamoto: column 14, lines 33-43).

**In regards to claim 21**, Tsukamoto discloses that the decoder is adapted to decode digital video signals encoded in accordance with the MPEG Standard (Tsukamoto: column 4, lines 59-62).


**In regards to claims 31**, Tsukamoto discloses a digital graphics bus (Tsukamoto: column 1, lines 21-22).

**Referring to claims 32-35**, it is well known in the art to use TDMS links for transmitting blanking interval data. One of ordinary skill in the art would have been motivated to use TDMS links for transmitting blanking interval data for the efficiency and scalability provided by using the standard video transmission protocol.



### Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kambiz Zand whose telephone number is (571) 272-3811. The examiner can normally be reached on Monday-Thursday (8:00-5:00). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on (571) 272-3799. The fax phone numbers for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
KAMBIZ ZAND  
PRIMARY EXAMINER

06/23/2006

AU 2132